

75592

Page 1

N900040100

Setup Start *NS1*

Stop *NS2*

*** 1 ***

Cust Item ID:

*** 1 ***

Customer:

Reference:

Run Start *NR1*

Date:

Stop ***NR2***

Date:

100		0.00		
100	HAND FINISHING THERMOFORMING			
Thermoform	Memo	0.00	x 2	Sh.
Thermoforming Machine	Set up Machine as per folio FTA 018 and D3676 program			11/10/27
110		0.00		
110	HAND FINISHING THERMOFORMING			
Thermoform	Memo	0.00	x 2	Sh.
Thermoforming Machine	Cut Blanks to 33.5" by 50"			11/10/27
120		0.00		
120	THERMOFORMING MACHINE			
Thermoform	Memo	0.00	x 2	Sh.
Thermoforming Machine	Thermoform as per Dwg. D3676 and Folio FTA 018 Dwg. Rev. <u>B</u> Folio Rev. <u>C</u>			11/10/27

Work Order ID 75592

75592

Page 2

October-26-11 10:30:39 AM






Item ID: D3676-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: BUBBLE WINDOW
Start Date: 10/26/11 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 10/31/11 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo 1) Check Surface finish for undesired marks, voids, dimples etc.2) Check depth of bubble to ensure conformity to drawing tolerances.	0.00 0.00				x2			M 11/10/27 PTO. →
140 *140* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				X1			JB 11/10/27
150 *150* Thermoform Thermoforming Machine	HAND FINISHING THERMOFORMING Memo 1) Trim off excess flange material2) Buff out any light scratches or blemishes3) Etch part number and batch number	0.00 0.00				x1			Wk. 11/10/31

W/O: 75592		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3676-1 PAR #: N/A Fault Category: Thermoforming NCR: ☒ Yes No DQA: A Date: 11.11.03
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: OK Date: 11/11/04

NCR: 957		WORK ORDER NON-CONFORMANCE (NCR) 950.11						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/10/07	130.	THERMOFORMED PART BLISTERED at 345°F. Verified change to folio to reduce heat with note to check temp. PC: Process	 9/11/07	Reduce heat to 325°F. Scrap & Replace 1 part - Give to Eng.	11/10/07 Dh.	 11.11.01	 9/11/07	 11.11.01
			 11/11/01					
		(last used was at same temp and was good) Temperature variables...						

NOTE: Date & initial all entries

75592

Page 3

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 10/26/11 **Start Qty:** 1.00

*** 1 ***

Cust Item ID:

Required Date: 10/31/11 **Req'd Qty:** 1.00

*** 1 ***

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

QC2- Inspect parts off machine FAI/FAIB

0.00

160

QC

Memo

0.00

Quality Control

170

QC5- Inspect part completeness to step on W/O

0.00

170

QC

Memo

0.00

Quality Control

1) Visually inspect for clarity, and proper formation.

180

Identify as per dwg & Stock Location: 11/11 0.00

0.00

180

Packaging

Memo

0.00

Packaging

Work Order ID 75592***75592***

Page 4

October-26-11 10:30:39 AM

Item ID: D3676-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: BUBBLE WINDOW
Start Date: 10/26/11 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 10/31/11 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

11/11/01 *[Signature]*
11-11-01

Picklist Print

October-26-11 10:30:39 AM

Page 1

Work Order ID: 75592

Parent Item: D3676-1

Parent Item Name: BUBBLE WINDOW

Start Date: 10/26/11

Required Date: 10/31/11

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev A New Product 01/24/2008 DL Verified:JLM
IPP Rev B Change Mat. to .236"" 08/29/2008 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MACRLICS.236 Plexiglass G .236"		Purchased	No				sf	378.6667		13.006503			

Location

Loc Qty

Loc Code

therm

378.66667

116030

37.33333

117563

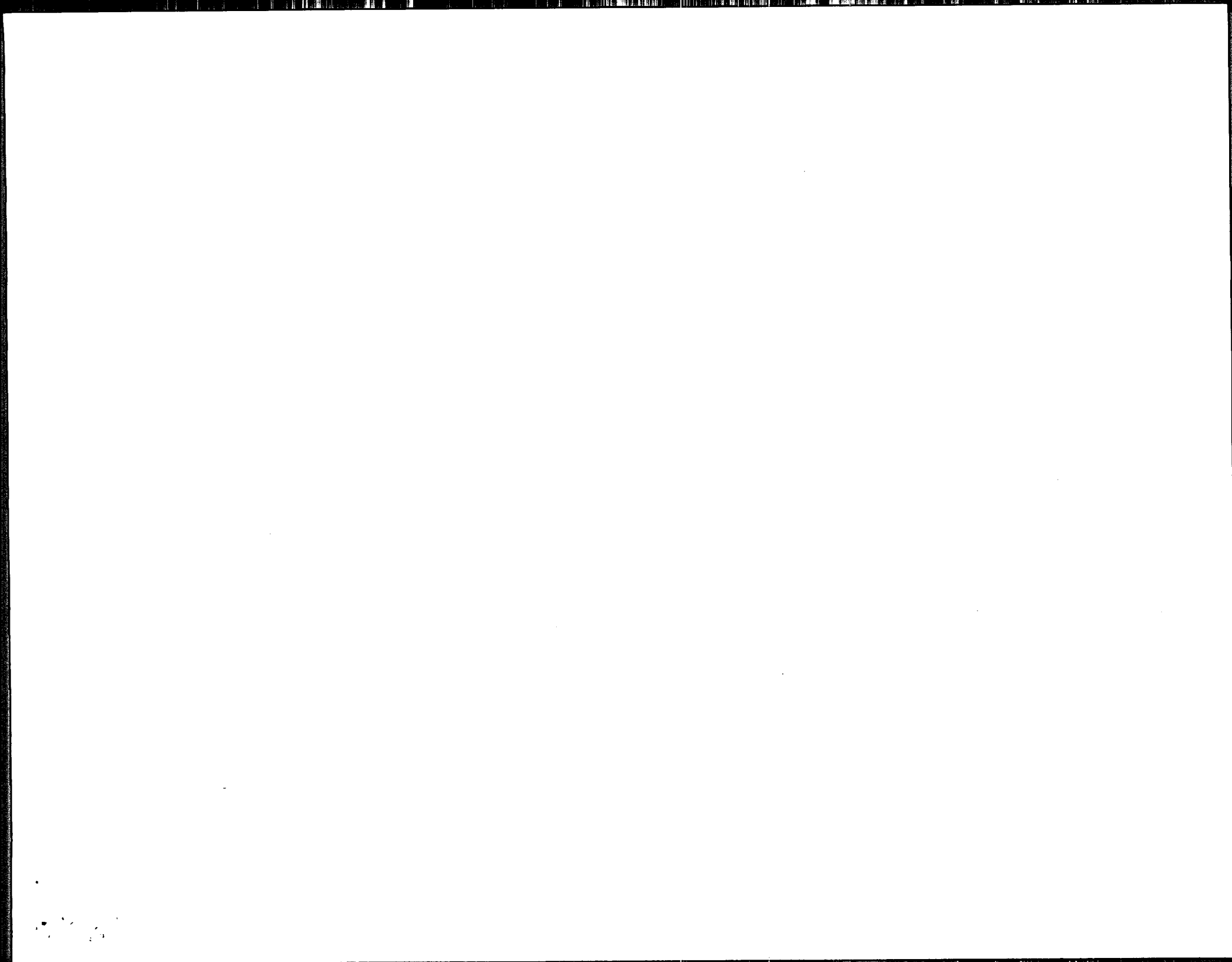
21.33334

119347

320

13.58 H.
13.58 H.

11/10/31



DART AEROSPACE LTD	Work Order:	75592
Description:	Part Number:	D.3676-1
Inspection Dwg: D.3676 Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST
THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than <i>N/A.</i>				
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by:	<i>W.H.</i>	Date:	11/10/27
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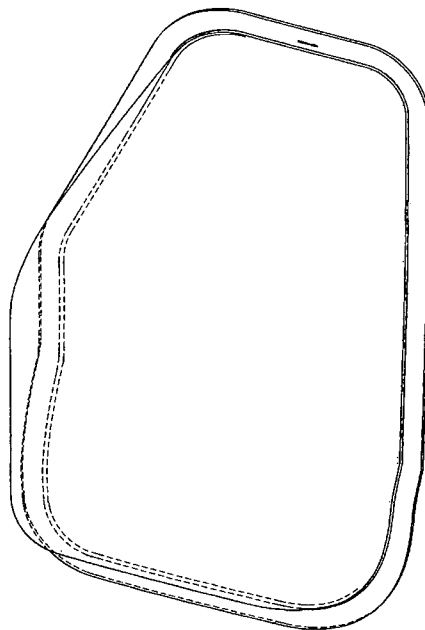
TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.050"	<i>M.I.N</i>	0.066"	✓			
0.070"	<i>M.I.N</i>	0.095"	✓			
0.090"	<i>M.I.N</i>	0.101"	✓			
17.0"	<i>± 0.5"</i>	17.0"	✓			

Measured by:	<i>DK</i>	Date:	11/10/31
Audited by:	<i>BB</i>	Date:	11/10/31
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
B	10.04.14	Added preliminary approval	KJ	

10.04.14



D3676-1 412 BUBBLE WINDOW

75592

RELEASED
09/04/07

NOTES:

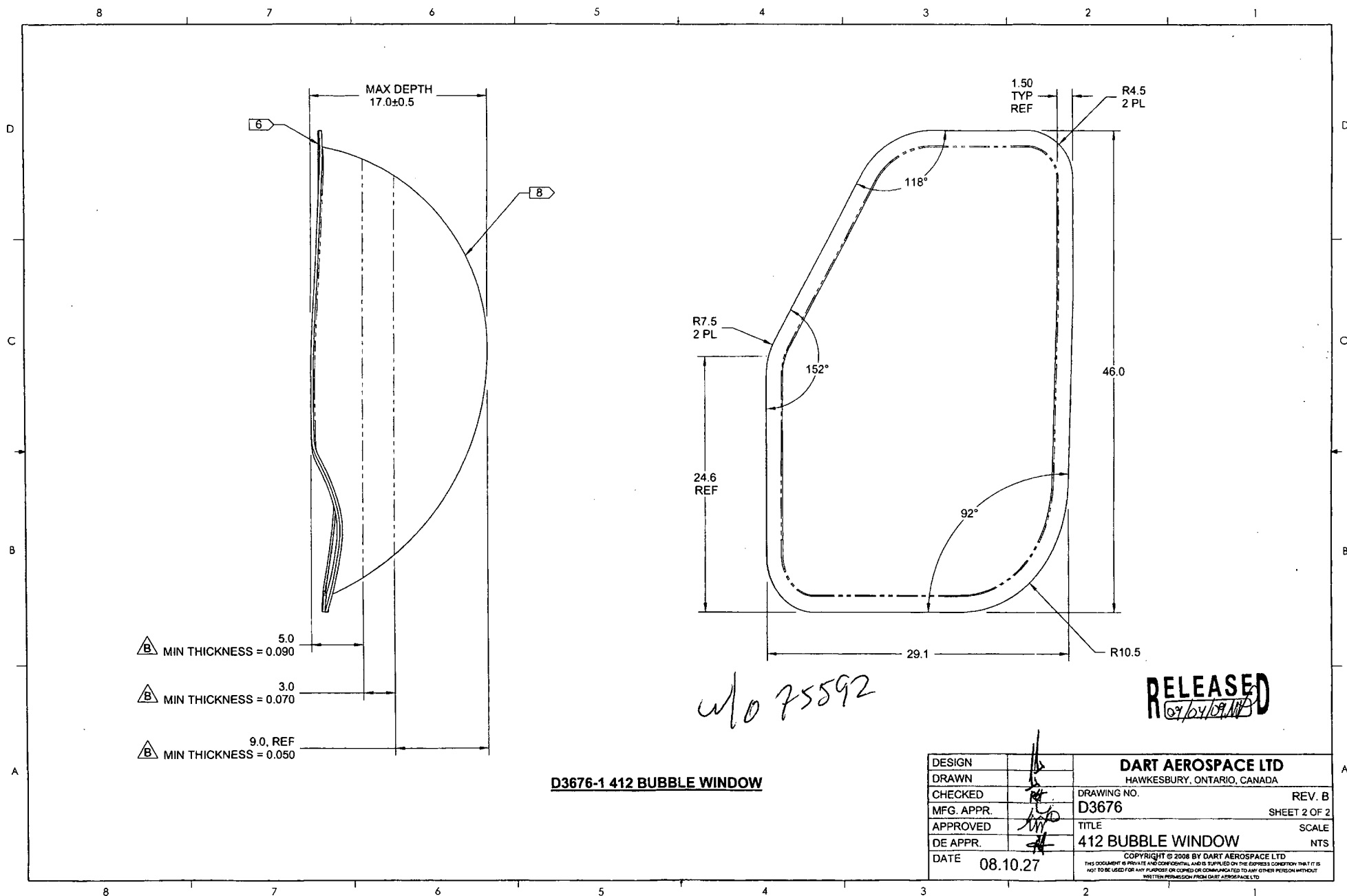
- 1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C
OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425,
0.236 THICK (STOCK REF. DART SPEC. M-ACRYLIC-S.236)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 TO 0.020 MAX
- 6) IDENTIFICATION: ENGRAVE P/N "D3676-1" & B/N "BXXXXX" ON FLANGE WITHIN 0.25" OF BUBBLE.
USE 0.125" LETTERS TO MAX. DEPTH OF 0.005"
- 7) WEIGHT: 11.0 lbs
- 8) VACUUM FORM PER FOLIO FTA018 USING DT8992 MOLD AND DART QSI 022

B	REVISED TOLERANCE ON MINIMUM THICKNESSES (ZN A8/B8-2). REASON: PRODUCTION FACILITY.	MB	08.10.27
A	NEW ISSUE	MB	08.02.29
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.10.27		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3676** REV. B
SHEET 1 OF 2
TITLE **412 BUBBLE WINDOW** SCALE NTS

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D3676-1 412 BUBBLE WINDOW

RELEASED
09/04/09

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3676	REV. B
MFG. APPR.		TITLE	SHEET 2 OF 2
APPROVED		412 BUBBLE WINDOW	SCALE
DE APPR.			NTS
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